1,101,585

PATENT SPECIFICATION

DRAWINGS ATTACHED

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COMPLETE SPECIFICATION

Raft

We, FINN TVETEN & Co. A/S, of Kongensgate 15, Oslo, Norway, a Company organised under the laws of Norway, do hereby declare the invention, for which we pray that a patent may be granted to us, and the method by which is to be performed, to be particularly described in and by the following statement: —

The present invention relates to rafts and, more particularly, to life rafts.

Life rafts which can be thrown into the sea without having to be launched from davits have proved very useful when it has been difficult to launch life boats.

It is known to provide collapsible life rafts in order to reduce the space occupied on board a boat or ship. Life rafts with solid floats are also known. However, life rafts of these types do not satisfy the increasingly rigorous demands imposed on life saving equipment at sea and are not used to any substantial extent. Inflatable life rafts, which require little storage space, are also known but have not proved entirely reliable.

Although rigid life rafts with solid floats made, for example, of a hard plastics foam material occupy considerably more space on board than collapsible life rafts, such rigid life rafts have proved very useful if provided with a canopy.

However, known life rafts with solid floats suffer from the considerable disadvantage that it is never possible to foresee with certainty which side will face upwards when the life raft is thrown into the water. Consequently, provisions must be placed on both sides of the life raft or in such a manner that they are accessible from both sides. If the life raft is provided with a canopy, then the canopy must be arranged so as to be erected on both sides or a complete conopy equipment must be provided on either side of the raft. The equipment is liable to be damaged during storage on board, and if it includes a canopy the same must be erected by the shipwrecked persons after the life raft has been launched.

[*Price*

An object of the present invention is to eliminate these drawbacks and provide a rigid raft having a solid floating part and which, when thrown into the water, will automatically adopt an operational position in which a predetermined side will face upwards.

According to the present invention there is provided a raft comprising two rigid portions of substantially equal size and containing solid buoyant matter, wherein the rigid portions are pivotally connected together so as to be capable of being rotated relative to each other about the pivotal axis so that the upper faces of the two portions face each other when the raft is in a folded condition, tension means for rotating the uppermost portion about said axis through 180° to render the raft in an open condition when it is floating, and a canopy positioned between the opposed upper faces of the raft portions when the raft is in the folded condition, the canopy being such that it is automatically erected when the uppermost portion is rotated as aforesaid by the tension means.

When such a collapsed raft is thrown into the water, the portion which is lowermost, will always adopt the correct postion with the resting side facing upwards. When the opening device is triggered it will always be the upper portion of the raft that is swung away from the lower portion, since because of the resistance afforded by the water the lower portion will not move much. Thereby the raft will adopt the correct operational position irrespective of which portion was lowermost originally.

The canopy and other equipment and provisions will therefore always be located on top of the unfolded raft, but will be in a protected position between the two portions during storage.

An embodiment of a raft according to the present invention will now be described by way of example with reference to the accompanying drawings in which: —

Figures 1, 2 and 3 are diagrammatical side views of the collapsible raft with canopy,

placed on the water, and show the raft in collapsed condition, during opening and in operational position respectively, and

Figure 4 is a perspective view of the raft with part of the canopy wall cut away for the sake of clarity.

The raft shown in the drawings mainly comprises a resting platform 1 and two portions 2 containing solid buoyant material, for example a hard plastics foam material. The two portions are pivotally interconnected by means of hinges 3. Frames 4 pivotally attached to the resting platform 1 keep a canopy 5 stretched in the unfolded condition of the raft. The frames 4 and the canopy 5 have beem omitted from Figure 1 for the sake of clarity. The canopy 5 is provided with openings 6 permitting entry into the raft. In addition, the raft may be provided with equipment such as flares, food, fuel, first aid etc.

The raft opening mechanism may consist of any arrangement which comprises tension means and provides a torque tending to swing the portions in an open condition when the raft is floating. The arrangement shown in the drawings comprises one or more tension springs 7, each connected to one portion and located in a groove in that portion of the raft and connected to the other portion of the raft by means of a wire 9. The tension spring 7 tends to swing the two portions away from each other but this will only happen when a connecting member 10, which normally keeps the raft in the collapsed condition, is moved from its connecting position and released the raft portions. Release of the connecting member 10 is preferably effected from the mother ship by means of a painter after the raft has been thrown into the water and adopted its floating position. The raft will then open automatically, with the desired side facing upwards, and hence be ready for use.

It will be understood that the invention provides a raft combining the following important advantages:—

a) It can be folded together so as to occupy only a small space on deck, and during storage on the mother ship, equipment such as the canopy will be in a protected position between the raft portions.

b) It has rigid floats and is therefore reliable.

c) It can be thrown freely into the sea since it is immaterial which side faces upwards initially.

d) After opening, which is effected when the raft is floating, a predetermined side of the raft will always face upwards and hence one set of provisions and equipment only will be sufficient.

e) It has a canopy which is erected automatically when the raft is unfolded.

WHAT WE CLAIM IS:—

1. A raft comprising two rigid portions of substantially equal size and containing solid buoyant matter, wherein the rigid portions are pivotally connected together so as to be capable of being rotated relative to each other about the pivotal axis so that the upper faces of the two portions face each other when the raft is in a folded condition, tension means for rotating the uppermost portion about said axis through 180° to render the raft in an open condition when it is floating, and a canopy positioned between the opposed upper faces of the raft portions when the raft is in the folded condition, the canopy being such that it is automatically etected when the uppermost portion is rotated as aforesaid by the tension means.

2. A raft as claimed in claim 1, wherein the tension means comprises one or more tension springs connected with both portions of the raft and constantly tending to rotate said portions relative to each other.

3. A raft substantially as hereinbefore described and as illustrated in the accompanying drawings.

MARKS & CLERK,
Chartered Patent Agents,
Agents for the Applicants.

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1 SHEETS This drawing is a reproduction of the Original on a reduced scale

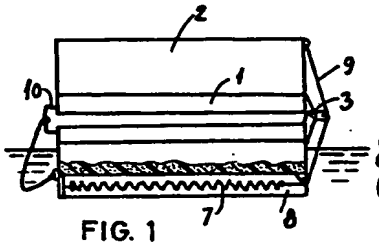

FIG. 1

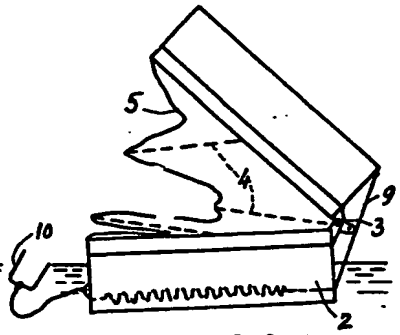

FIG. 2

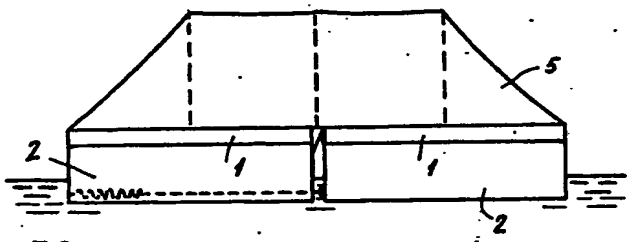

FIG. 3

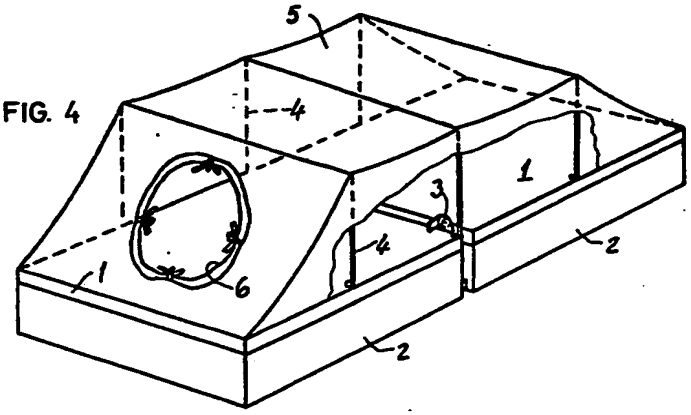

FIG. 4